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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,595

01/23/2004

Habib Riaz

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7729

7590

09/11/2006

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EXAMINER

DUONG, DUC T

ART UNIT

PAPER NUMBER

2616

DATE MAILED: 09/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/763,595	RIAZI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Duc T. Duong	2616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 July 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-10,14-18,21-25 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 3-5,11-13,19,20,26 and 27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 2, 6-10, 14-18, 21-25, and 28-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding to independent claims 1, 9, 17, and 24, there does not appear to be a written description of claimed limitation "a first subset of said plurality of sub-carriers are allocated pursuant to a standard for transmission of information and a second subset of said plurality of sub-carriers are allocated pursuant to said standard as inactive sub-carriers that do not carry information". As cited on page 8 of applicant's argument, such claimed limitation can be found on pages 2-6 of the specification. However, the examiner found no such teaching. The closest description to the claimed limitation can be found on page 10, lines 12-25, and it only how the sub-carriers are established. It does not teach for allocating for two different sub-set of carrier with one for transmission of information and the other for transmission of no information. Thus, applicant has amended the claims by adding new matter.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 2, 6-10, 14-18, 21-25, and 28-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Schafer et al (U.S. Patent 6,134,267).

Regarding to claims 1 and 9, Schafer discloses an orthogonal frequency division multiplexing OFDM transmitter (Fig. 9 col. 1 lines 13-30) for transmitting a signal comprising an encoder 2 for modulating said signal, a transformer 10 for creating said signal having a plurality of sub-carriers, and means 8 for inserting an identifying signal TII on inactive sub-carriers (col. 1 lines 31-35; the TII signal is inserted in a null symbol (inactive sub-carriers)).

Regarding to claims 2 and 10, Schafer discloses using differential demodulation (implying of differential modulation) said signal in the frequency domain (col. 2 lines 39-42).

Regarding to claims 6 and 14, Schafer discloses the inactive sub-carriers (null symbol) carrying said identifying signal are transmitted with each OFDM symbol (col. 1 lines 34-35).

Regarding to claims 7 and 15, Schafer discloses the transformer implements an Inverse Fast Fourier Transform (col. 1 line 19).

Regarding to claims 8 and 16, Schafer discloses the transformer implements an orthogonal transform (col. 1 lines 32-33; noted the standard ETS 300 401 implements an orthogonal transmission).

Regarding to claims 17 and 24, Schafer discloses an orthogonal frequency division multiplexing OFDM receiver (Fig. 1 col. 1 lines 13-30) for receiving a signal comprising a decoder 19 for demodulating said signal, a transformer 16 for transforming said received signal to recover an signal in the frequency domain having a plurality of sub-carriers, and means 18 for processing an identifying signal received on inactive sub-carriers (col. 1 lines 31-35; the TII signal is inserted in a null symbol (inactive sub-carriers)).

Regarding to claims 18 and 25, Schafer discloses differential demodulates said signal in the frequency domain (col. 2 lines 39-42).

Regarding to claims 2 and 10, Schafer discloses using differential demodulation (implying of differential modulation) said signal in the frequency domain (col. 2 lines 39-42).

Regarding to claims 6 and 14, Schafer discloses the inactive sub-carriers (null symbol) carrying said identifying signal are transmitted with each OFDM symbol (col. 1 lines 34-35).

Regarding to claims 7 and 15, Schafer discloses the transformer implements an Inverse Fast Fourier Transform (col. 1 line 19).

Regarding to claims 8 and 16, Schafer discloses the transformer implements an orthogonal transform (col. 1 lines 32-33; noted the standard ETS 300 401 implements an orthogonal transmission).

Regarding to claims 17 and 24, Schafer discloses an orthogonal frequency division multiplexing OFDM receiver (Fig. 1 col. 1 lines 13-30) for receiving a signal comprising a decoder 19 for demodulating said signal, a transformer 16 for transforming said received signal to recover an signal in the frequency domain having a plurality of sub-carriers, and means 18 for processing an identifying signal received on inactive sub-carriers (col. 1 lines 31-35; the TII signal is inserted in a null symbol (inactive sub-carriers)).

Regarding to claims 18 and 25, Schafer discloses differential demodulates said signal in the frequency domain (col. 2 lines 39-42).

Regarding to claims 21, and 28, Schafer discloses the inactive sub-carriers (null symbol) carrying said identifying signal are received with each OFDM symbol (col. 1 lines 34-35).

Regarding to claims 22, and 29, Schafer discloses the transformer implements a Fast Fourier Transform (col. 1 line 23).

Regarding to claims 23, and 30, Schafer discloses the transformer implements an orthogonal transform (col. 1 lines 32-33; noted the standard ETS 300 401 implements an orthogonal transmission).

#### ***Allowable Subject Matter***

5. Claims 3-5, 11-13, 19, 20, 26, and 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Duong whose telephone number is 571-272-3122. The examiner can normally be reached on M-F (9:00 AM-6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 2616

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DD  
DD



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